

We Claim:

1. A configuration for detecting optical signals, comprising:

a planar light circuit including an optical channel;

said planar light circuit having a trench formed therein and interrupting said optical channel; and

a detection unit disposed in said trench detecting optical signals in said optical channel.

2. The configuration according to claim 1, wherein said planar light circuit terminates said optical channel.

3. The configuration according to claim 1, wherein said trench of said planar light circuit includes a support submount, said support submount supporting said detection unit.

4. The configuration according to claim 3, including a row of said detection units disposed on said support submount, said detection units being photodiodes.

5. The configuration according to claim 4, including a second row of photodiodes on said support submount offset from said first row.

6. The configuration according to claim 4, wherein:

said planar light circuit has a plane; and

said photodiodes each have a bevel angled to said plane of said planar light circuit.

7. The configuration according to claim 3, including metalized areas on said planar light circuit; said support submount being mounted on said optical circuit and contacting said optical circuit via said metalized areas.

8. The configuration according to claim 7, including solder bumps on said support submount for connecting to contact areas of the optical circuit.

9. The configuration according to claim 7, including gold metalizations on said support submount, said gold metalizations simultaneously serving as a conductor track and as mounting areas for said detection unit, said solder bumps, and bonding wires.

10. The configuration according to claim 4, including a common metalization connecting said photodiodes to said support submount.

10075536-021402
2014-02-09 14:02

11. The configuration according to claim 3, wherein said support submount is optically transparent.

12. The configuration according to claim 4, wherein said photodiodes are laser-soldered on said support submount from below through said support submount.

13. The configuration according to claim 1, wherein said trench formed in said planar light circuit complements said detection unit, said detection unit being inserted tightly into said trench.

14. An attenuator apparatus, comprising:

an attenuator unit;

a multiplicity of optical principal channels carrying optical signals having an optical power, respectively passing through said attenuator unit, and having a respective associated monitor channel receiving a particular percentage of the optical power in said associated principal channel; and

a configuration detecting the optical signals in said monitor channels, including:

a planar light circuit including an optical channel;

said planar light circuit having a trench formed therein and interrupting said optical channel; and

a detection unit being disposed in said trench and detecting the optical signals in said optical channel.

15. The attenuator apparatus according to claim 14, wherein said monitor channels run parallel to said respective optical principal channels without crossing one another or said principal channels.

16. The attenuator apparatus according to claim 14, wherein said principal channels respectively run along said trenches for said detection units and are undisturbed in said planar light circuit.

17. A method for manufacturing a configuration for detecting optical signals in an optical channel in a planar light circuit, which comprises the following steps:

providing a support submount;

mounting a detection unit on the support submount;

providing a planar light circuit with an optical channel;

10075536-021403

interrupting the optical channel by forming a trench in the planar light circuit;

placing the support submount on the planar light circuit using flip-chip mounting; and

inserting a detection unit into the trench.

18. The method according to claim 16, which further comprises, before the mounting step:

applying and structuring a metalization to the submount carrier;

applying and structuring a soldering stop layer to the submount carrier; and

applying solder bumps to the submount carrier.

10075536.021402